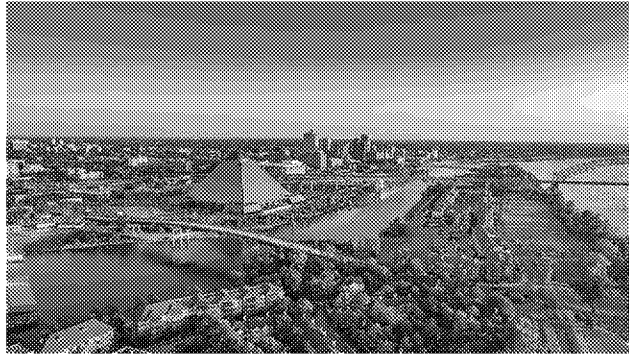


# Ethylene Oxide and Risk in the Community of Memphis, TN

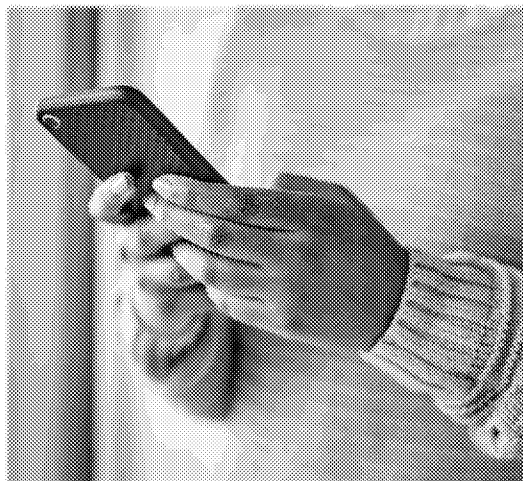


# Translation

This evening's session  
will offer live  
interpretation through  
zoom online audio.

- To access the audio interpretation services, click the globe or interpretation button. Then select your language of choice, English, Spanish, or Chinese Simplified.
- La sesión de esta noche ofrecerá interpretación en vivo a través de audio zoom en línea. Para acceder a los servicios de interpretación de audio, haga clic en el botón de globo o interpretación. Luego seleccione su idioma preferido inglés, español o chino simplificado.
- 今晚的会议将通过 Zoom 在线音频提供现场口译。想要使用音频口译服务，请单击地球图标或“口译”按钮。然后选择所需语言：英语、西班牙语或简体中文。

**Use the Q and A module to  
ask questions or ask for  
technical help.**



- EPA Region 4 Contact Information:
  - 800-241-1754
  - Region4EtO@epa.gov
- EPA Website:  
[www.epa.gov/eto/Memphis](http://www.epa.gov/eto/Memphis)

## Why we are here today

1

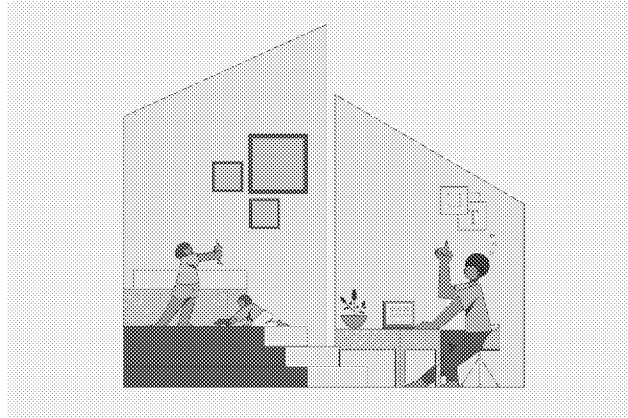
Pollution is increasing health risks in your neighborhood.

2

We are working to reduce this risk in three ways.

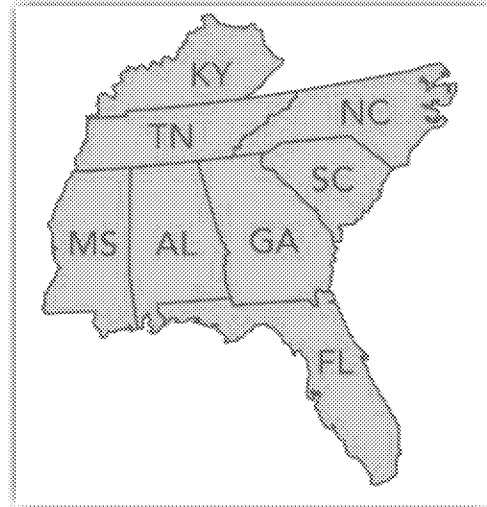
3

We want to hear from you.



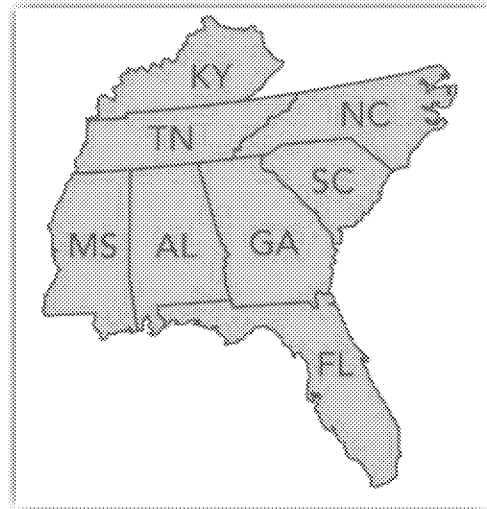
**Daniel Blackman**

**EPA Region 4  
Administrator**



**Caroline Freeman**

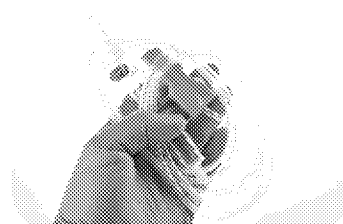
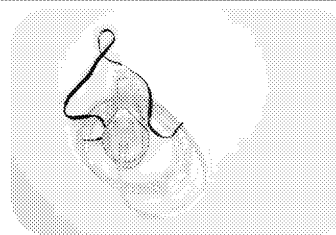
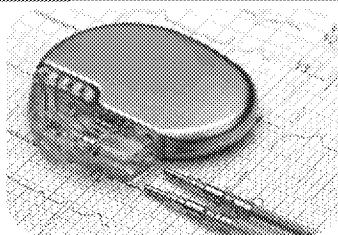
**EPA Region 4 Air and  
Radiation Division Director**



# What is Ethylene Oxide?

- **Gas**
- **Colorless**
- **Flammable**
- **Odorless**

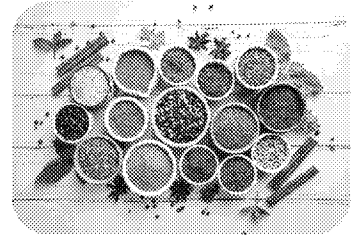
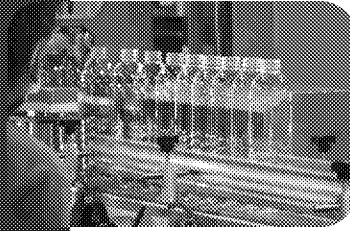
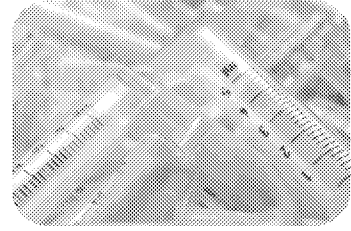
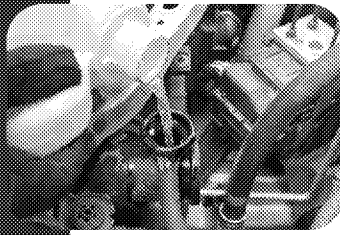
*(in concentrations  
we see in communities)*





## EtO Uses

- Makes Other Products
- Sterilizes



# National Context



- Approximately **100** commercial sterilizers in the United States
- Sterilization Services of Tennessee is **one of 23** with the **highest risk**
- More information on all facilities at <https://www.epa.gov/eto>

# EPA Headquarters Modeling Analysis

- EtO Uses
- Facility Processes
- Facility Equipment
- Weather
- Community Details

Modeling Analysis

**Maps the Risk  
Caused by EtO  
from a Facility**

## Sterilization Services of Tennessee Memphis, Tennessee

**Maximum Risk Level: 2,000/Million**

**Blue:** Estimated lifetime cancer risks of 100 to 2,000 in one million.

**Lifetime cancer risk** - breathe air containing EtO at the level estimated at that location for 24 hours a day, every day for 70 years.

**This estimated risk is in addition to cancer risk from other causes.**

For more information and to view this map online: <https://www.epa.gov/eto/memphis>





#### Recent Steps Taken to Learn about Risk and Reduce It:

- July 2022: Complete analysis showing where, in which specific communities, risk is highest for people who live nearby.
- Continue to seek more immediate reductions of EtO coming out of facilities.

#### Previous work:

- 2016: Learn EtO is more dangerous when people breathe it in.
- 2018: Initial analysis showing that EtO might be causing risk near certain types of facilities.
- 2020-2022: Collect and verify data and complete analysis to understand more exactly where there is risk and why.

**Current knowledge suggests  
these risks are not a concern**

**No indication of non-cancer risk:**

- From soil or water
- Acute or emergency health impacts
- From consumer use of products made with or sterilized with EtO



# Special Considerations about Risk



Workers may be exposed  
at higher levels.



Children and babies may  
be at higher risk.



This risk assessment and the  
rule it supports are focused on  
community risk not worker risk.

# Over your lifetime

Breathing in EtO over  
many years can cause  
breast cancer and white  
blood cell cancer.





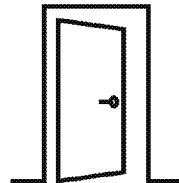
# Where EtO Comes from at the Facility

There are two types of EtO emissions from facilities:

Controlled Emissions



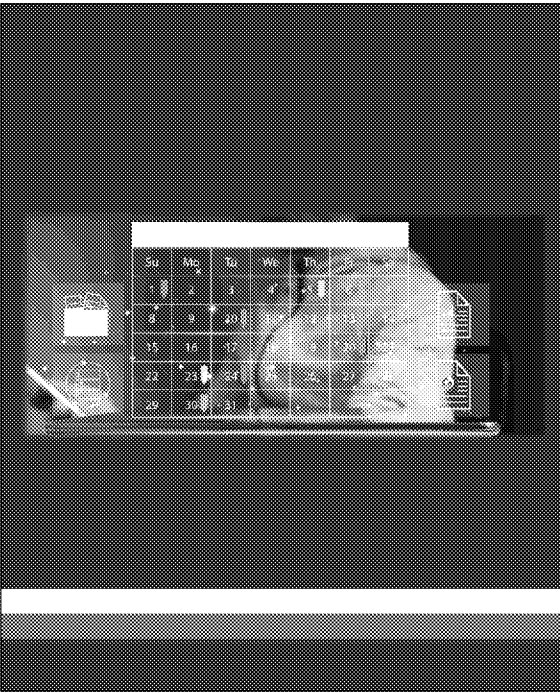
Fugitive Emissions



In this community, the majority of the risk is being caused by fugitive emissions

**Reducing EtO coming  
out of the facility  
is the best way  
to reduce risk.**





## Timeline

- New regulation to be proposed in the coming months.
- The public comment period will last 60 days.
- Final rule is expected in 2023.
- Once the rule is final, the Clean Air Act allows up to 2 or 3 years to comply with new requirements but EPA plans to solicit comments on a shorter period.
- Additional resources on the comment process are available here:  
<https://www.epa.gov/eto/comment>

# Key Points

**EPA has learned that EtO is causing health risk in your community.**

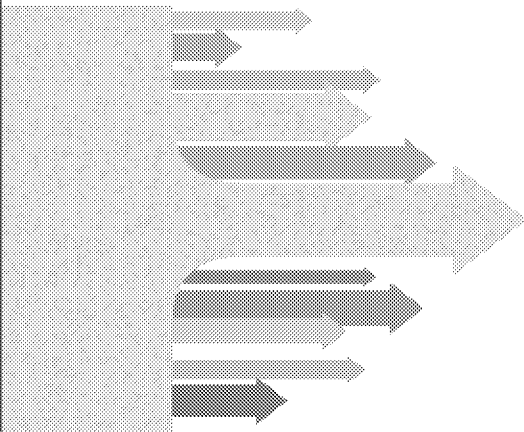
**We are working to reduce this risk by:**

1. Working across government and industry to reduce EtO coming from Sterilization Services of Tennessee.
2. We are updating air pollution regulations to be more protective of your health.
3. We are sharing these risk results with you, so you have the same information we have.

- Proceed to microphone or if you do not wish to speak at a microphone, please write your question on the comment card and pass to any EPA representative. Questions provided on the cards will be read aloud by our moderator and responded to during the Q & A session.
- You may also submit questions to EPA via [eto@epa.gov](mailto:eto@epa.gov) and EPA will respond via email after the meeting.



## Next Steps



- Go to <https://www.epa.gov/eto/memphis> to learn more
- You can find more information about EtO at [www.epa.gov/eto](http://www.epa.gov/eto)
- Sign up on the “Interested Individuals” list at the front to receive updates.